



First record of *Platax teira* (Forsskål, 1775), Longfin Batfish (Acanthuriformes, Ephippidae), in Cabo Pulmo National Park, Mexico

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Abstract. *Platax teira* (Forsskål, 1775) is distributed from the west coast of Africa and the Red Sea to the central Pacific Ocean. Here, we report the observation of an adult specimen at Cabo Pulmo National Park, Mexico, made during a recreational dive on 11 December 2023. This record represents an addition of a new genus to the reef-fish fauna of the Tropical Eastern Pacific. The possible means of arrival of the fish (natural dispersal with floating materials or a human-mediated introduction) is discussed.

Key words. Alien species, citizen science, marine protected areas, range expansion

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INTRODUCTION

The genus *Platax* Cuvier, 1816 has five recognized species, and one of them, *Platax teira* (Forsskål, 1775), Longfin Batfish, is widely distributed throughout the Indian Ocean and the western Pacific Ocean (Froese and Pauly 2024; Figure 1). This species can reach 65 cm in length and inhabits diverse ecosystems such as mangroves, coral reefs, lagoons, and other coastal environments, from 3 to 70 m deep (Leu et al. 2018). This species is currently assessed as in Least Concern in the International Union for the Conservation of Nature (IUCN) Red List (Carpenter and Robertson 2019). Its use is limited to sport fishing and the aquarium trade due to its colorful body and physical characteristics during the juvenile stage (Ngo et al. 2024). Although *P. teira* is originally distributed in the tropical Indo-Pacific, this species has been reported as invasive in the Mediterranean Sea (Golani et al. 2011), and it was also recorded in New Zealand during the warm season (Francis et al. 1999). There is no evidence of its presence in either coast of the Americas. Here, we present the first record *P. teira* in the Tropical Eastern Pacific, which is a remarkable addition to the regional fauna.

METHODS

A specimen of *Platax teira* was observed during a recreational dive on 11 December 2023 at a depth of 18 m in a site known as "El Islote", a coastal rocky islet in Cabo Pulmo National Park. The observation was documented by a video using a Sony A1 camera at a resolution of 1392 × 782 pixels (Figure 2A; Supplementary file Video S1). Ethical review and approval were not required for this study because it did not involve animal experimentation or harm. The organism was not captured because of the lack of a collection permit. The identification follows Allen et al. (2015) and Froese and Pauly (2024).



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RESULTS

Platax teira (Forsskål, 1775)

Figure 2A

New record. Mexico — BAJA CALIFORNIA SUR • Cabo Pulmo; 23.406°N, 109.407°W; 18 m depth; 11 Dec. 2023; Patrick Webster obs.; 1 adult; sex undetermined.

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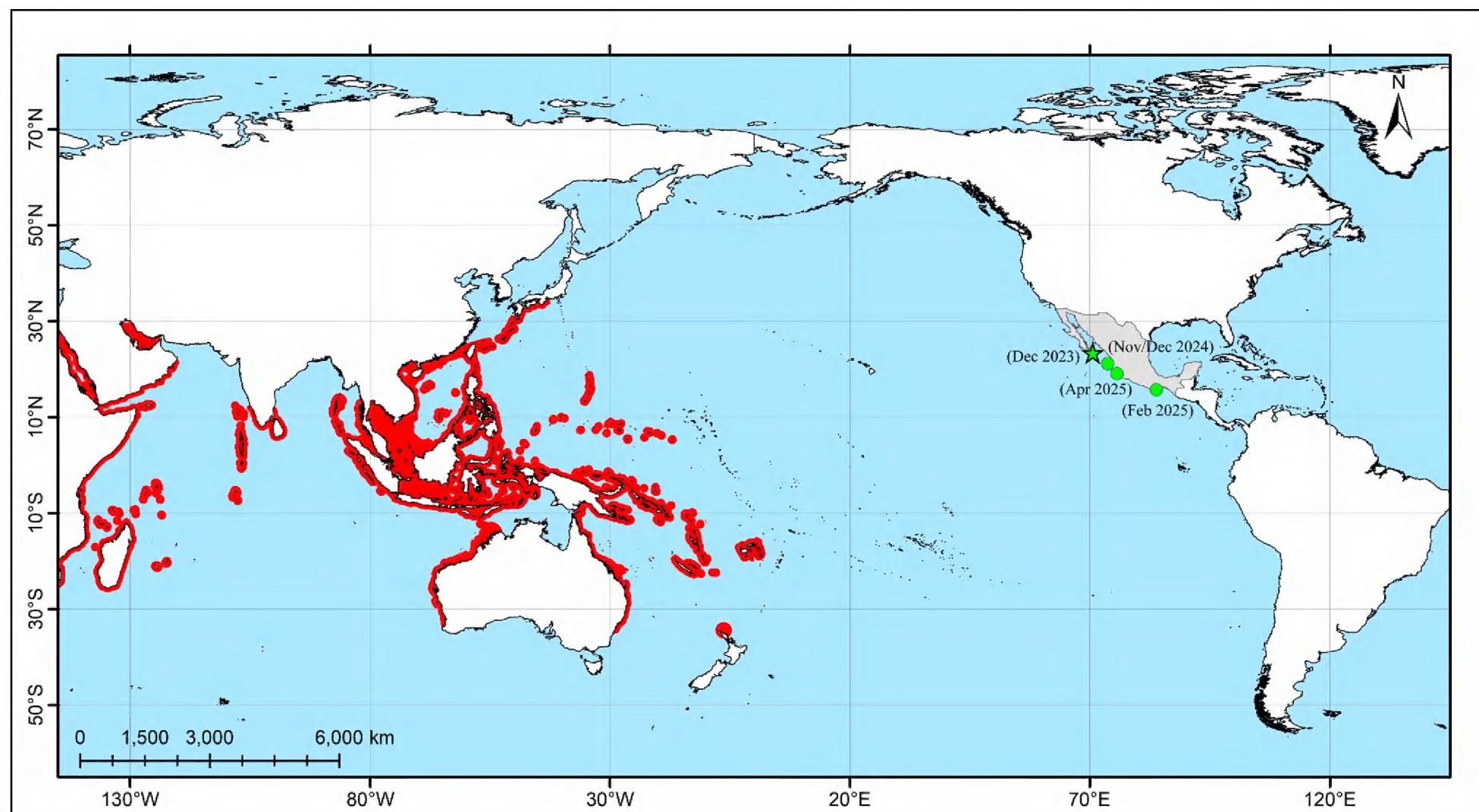


Figure 1. Geographical distribution of *Platax teira* (red symbols) according to the IUCN. The green star represents the new record of the species at Cabo Pulmo National Park, Mexico. The green dots indicate additional records of sightings in Mexico that occurred after the initial observation in Cabo Pulmo.



Figure 2. Specimen of *Platax teira* filmed by Patrick Webster on 11 December 2023 at Cabo Pulmo National Park, Mexico. **A.** Side view of adult *P. teira* over a rocky substrate. **B.** *P. teira* together *Bodianus diplotaenia* and *Johnrandallia nigrirostris*, endemic species from the Tropical Eastern Pacific.

Identification. *Platax teira* is characterized by having highly compressed, disc-shaped, silver body; the head is short and present a narrow, dark bar running through eye. Another wide, black bar extends from the back of the pelvic fin to the upper part of the body. There is a hump above the eyes. The mouth is small. The dorsal and anal fins have dark edges. A large, dark blotch is present above the rear edge of the ventral fin.

The fish was not captured, and for that reason the sex of the specimen (the species lacks external sexual dimorphism), its length, and weight were not determined. The specimen was observed being cleaned by two endemic Tropical Eastern Pacific species: *Bodianus diplotaenia* (Gill, 1862) and *Johnrandallia nigrirostris* (Gill, 1862) (Figure 2B; Supplementary file Video S1).

DISCUSSION

Cabo Pulmo National Park (CPNP) harbors the northernmost coral reef in the Tropical Eastern Pacific and the only ecosystem of its kind in the Gulf of California. The area was decreed as a national park in 1995

and is considered worldwide as an example of sustainable development and conservation success (Olán-González et al. 2023). The CPNP is the most important recreational diving site in northwestern Mexico (Pascos-Acuña et al. 2020). There are 302 fish species reported from the CPNP (Ayala-Bocos et al. 2018), including a number of Indo-Pacific taxa, and some of these are relatively abundant, such as *Acanthurus triostegus* (Linnaeus, 1758), *Arothron meleagris* (Lacepede, 1798), and *Zanclus cornutus* (Linnaeus, 1758). However, no previous records of *P. teira* exists from the CPNP or the Mexican Pacific.

The presence of *Platax teira* in CPNP is highly unusual and represents an addition of a new genus to the reef fish fauna of the Eastern Pacific. The national park is one of the most thoroughly studied marine protected areas in Mexico and has continuous biological monitoring (Olivier et al. 2022). For that reason, it is improbable that this fish has entered the reef in prior to 2023. A vagrant individual has no chance to start a new population and successfully colonize areas of the Eastern Pacific (Luiz et al. 2015), but nevertheless it is important to discuss the way this species may have reached the Eastern Pacific and the possibility of new arrivals.

We initially thought that the Cabo Pulmo specimen was a possible accidental visitor and, being already an adult, might have been an intentional release. This phenomenon has been documented with many other ornamental fish species that aquarists release into the ocean after these fish lose their attractive juvenile traits or grow to a large adult size (Micael et al. 2023). One such case was observed on the Mexican coast in 2018 and 2020, when *Pomacanthus maculosus* (Forsskål, 1775) was reported by Zavala-Jiménez (2022). *Platax teira* could qualify as a potentially introduced species, given that individuals undergo noticeable color changes during ontogeny, reach significant sizes as adults, and are among the most exported ornamental fish species in the aquarium trade (Leu et al. 2018); intentional release could explain the only record from Mexico. However, during November and December 2024, three specimens were observed in Marietas Islands National Park and Cruz de Huanacaxtle (Medina-Rosas and Moreno-López, 2025; Figure 1) in Nayarit. Furthermore, in 2025, according to iNaturalist records, one juvenile *P. teira* specimen was reported in Huatulco, Oaxaca, in February 2025 (iNaturalist 2025a), and three more specimens were documented in Manzanillo, Colima, during April 2025 (iNaturalist 2025b). In summary, eight specimens of *P. teira* have been reported at five sites across the Mexican Tropical Pacific over the last 17 months.

The colonization of the Gulf of California and the Mexican Tropical Pacific by tropical species endemic to the Southeast Pacific has become increasingly common over the last decade (Zepeta-Vilchis et al. 2013; Hernández-Velasco et al. 2016; Becerril-García et al. 2018; Fernández-Rivera-Melo et al. 2018, 2021; Rosales-Casían 2022). This phenomenon is likely driven by rising temperatures due to global climate change. In contrast, the arrival of Indo-Pacific species to the western coast of the Americas remains intermittent and tends to occur primarily during warm periods associated with El Niño–Southern Oscillation (ENSO) events (Wood et al. 2016; Romero-Torres et al. 2018).

Considering that the observation of *P. teira* at Cabo Pulmo occurred in 2023, during a period when the eastern Pacific was influenced by a strong El Niño event (López-Pérez et al. 2024), we suggest that the specimens observed could have been transported by Kelvin waves from the central Pacific, potentially carried by floating debris or algal rafts (Luiz et al. 2015; Froese and Pauly 2024). Another possibility is that the species reached the eastern Pacific through the transport of adults or larvae by the North Equatorial Counter Current, as has been documented with other taxa (Martín-del-Campo et al. 2023). However, this hypothesis would imply that the species had been previously observed at Cabo Pulmo, an unlikely scenario given that the reef is under constant monitoring by managers, dive guides, and researchers. If *P. teira* arrived to Mexico via marine currents, one of the first places to detect its presence would likely be the Revillagigedo Archipelago National Park; however, at this time, no records of this species have been reported from Revillagigedo.

The increasing sightings of adult and juvenile *P. teira* in the Mexican Tropical Pacific emphasize the pressing need for thorough and systematic monitoring, particularly in natural protected areas as Revillagigedo and other reef sites as Islas Marias due their role in the dispersal of Indo-Pacific species in Mexico (López-Pérez et al. 2015). These efforts are essential to better evaluate and address the potential ecological impacts of this species in Mexico.

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ADDITIONAL INFORMATION

Conflict of interest

The authors declare that no competing interests exist.

Ethical statement

No ethical statement is reported.

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Author contributions

Conceptualization: DPR, HRB, LVV. Writing – original draft: DPR, HRB. Methodology: PW, LB, HRB.

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Data availability

All data that support the findings of this study are available in the main text or in the supplementary files.

Video S1. *Platax teira* recorded at Cabo Pulmo National Park, Mexico on 11 December 2023. (MP4 format)

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